NEW YORK UNIVERSITY

CENTER ON INTERNATIONAL COOPERATION

Global Governance and Food Security as Global Public Good

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The world faces old and new security challenges that are more complex than our multilateral and national institutions are currently capable of managing. International cooperation is ever more necessary in meeting these challenges. The NYU Center on International Cooperation (CIC) works to enhance international responses to conflict, insecurity, and scarcity through applied research and direct engagement with multilateral institutions and the wider policy community.

CIC's programs and research activities span the spectrum of conflict, insecurity, and scarcity issues. This allows us to see critical inter-connections and highlight the coherence often necessary for effective response. We have a particular concentration on the UN and multilateral responses to conflict.

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List of Abbreviations	
ABNJ	Areas Beyond National Jurisdiction
ACC SCN	Administrative Committee on Coordination Sub-committee on Nutrition
AFSI	Aquila Food Security Initiative
AMIS	Agricultural Market Information System
BRIC	Brazil, Russia, India, and China
CAADP	Comprehensive Africa Agriculture Development Programme
CARICOM	Caribbean Community and Common Market
CFA	Comprehensive Framework for Action
CFS	UN/FAO Committee on World Food Security
CSO	Civil Society Organization
ECO	Environmental Conservation Organization
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FPIC	Intergovernmental Panel on Climate Change
G8/G20	Group of 8/Group of 20
GAFSP	Global Agriculture and Food Security Program
GEF	Global Environmental Facility
GPBs	Global Public 'Bads'
GPGs	Global Public Goods
HLTF	High-Level Task Force
IAASTD	International Assessment of Agricultural Knowledge, Science and Technology for Development
IAFN	International Agri-Food Network
ICN	International Conference on Nutrition
IFAD	International Fund for Agricultural Development
IGAD	Intercontinental Government Authorities For Development
IGC	International Grain Council
INGO	International Non-Governmental Organization
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IT PGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
MDGs	Millennium Development Goals
NGOs	Non Governmental Organization
OECD	Organization for Economic Co-operation and Development
R&D	Research and Development
SUN	The Scaling-Up Nutrition Movement
UCFA	Updated Comprehensive Framework for Action
UNICEF	United Nations International Children's Emergency Fund
US	United States
WEF	World Economic Forum
WFP	World Food Programme
WTO	World Trade Organization

A. Context for Food Security

1. Food security as an international issue requiring collective global action

1. Food is essential for any living being. As a result, when and where it is scarce, it provides power for those who control it and the resources required for producing food. Food is also a commodity and a source of wealth: control over some elements of the food chain impacts on food prices, availability and access, and the ethics of speculating in food commodities are being debated.[1] Production of food also competes with other areas, including technology research, for energy, natural resources and space. Food insecurity has been one of the engines for technological and social innovation, productivity and organization. The perceived or actual shortage of food, or the need for resources for producing food, has been a driver of migrations for entire populations and has been at the root of many political conflicts.

2. With the expansion of global networks for trade, since the second half of the 19th century there has been increasing awareness of the interdependency of nations' agriculture and food systems. This translated into the establishment of the International Institute of Agriculture (1905), the first intergovernmental institution with the mandate of addressing food and agricultural issues. After World War I, the League of Nations had issues relating to food supplies and nutrition on its agenda.[2]

3. Hunger and famine in Europe in the aftermath of World War II brought the issue of food as a threat to national and regional security back to the forefront.[3] This culminated in the recognition that a formal intergovernmental institutional framework would be required: the FAO of the United Nations was established (1945) as the first international institution with the mandate to deal specifically with hunger, food and agriculture[4] as an international responsibility. New and unforeseen issues during subsequent years required the intergovernmental community to adapt this institutional framework.[5]

4. In the second half of the 20th century, new communication technologies and access to instant information[6] about events in other continents – combined with international mass tourism, including to developing countries - generated a sense of a "global village" and of interdependency and responsibility for the welfare of people living in other parts of the world.

5. In the late nineties, and particularly since 2000, food security has become a standing item on the global agenda and the object of various intergovernmental processes (most notably a series of world food summits dealing with food security in 1996, 2002, 2008); the first of the eight Millennium Development Goals (MDGs) deals with poverty and hunger.[7] The food riots in several countries after the hike in food commodity prices in 2008 reaffirmed the links between food security and development and broader security, and the need to address food insecurity through cross-cutting collective action.

6. The topic of food security expanded from being addressed only in specialized fora (e.g. international and national organizations dedicated to food and food production) to being included in the broader spectrum of governance mechanisms, through revamping of existing tools, creation of dedicated high-level groups, and placing food security as a standing item of the meetings of the G8/G20. International NGOs also play a critical role in raising global awareness about the global dimension of food security/insecurity.

1. w ww.oxfam.org/en/grow/policy/not-game-speculation-vs-food-security.

2. Source: FAO: Its origins formation and evolution 1945-1981, www.fao.org.docrep/009/p4228e/P4228e01.htm

3. See also the Marshall Plan Speech in /en.wikisource.org/wiki/The_Marshall_Plan_Speech.

4. For the origins of FAO please refer to: www.fao.org/fileadmin/templates/getinvolved/pdf/FAO_Italia_per_web_19ott.pdf. FAO's goals were stated as: "raising levels of nutrition and standards of living of the peoples under their respective jurisdictions; securing improvements in the efficiency of the production and distribution of all food and agricultural products; bettering the condition of rural populations; and thus contributing towards an expanding world economy and ensuring humanity's freedom from hunger".

5. 1961: WFP to deal with food shortages in developing countries, 1971: CGIAR as worldwide network of agricultural research centers to coordinate international agricultural research efforts aimed at reducing poverty and achieving food security in developing countries, 1974: IFAD to deal with funding requirements for investment in rural development, 1964: joint activities between FAO and the World Bank, 1965: UNDP to fund technical cooperation including rural development.

6. TV in the sixties and internet in the late nineties.

7. www.un.org/millenniumgoals/poverty.shtml

7. Despite a proliferation of global mechanisms since the 2008 food crisis, the international system continues to struggle with integrating international and national policies, and suffers from a lack of coordination with the private sector. This paper discusses food security/food insecurity in the context of emerging global trends, and the mechanisms and processes established by governments to manage and govern it in times of shocks and crisis.

2. Evolution of thinking on food security

8. The term "food security" evolved in response to the recognition of the individual, national, and global impacts of production shortfalls and market failures in agriculture. The challenge of finding the appropriate definition was on how to link the individual, household, national and global requirements for food security, including aspects of individual nutrition, and to make it an effective driver for policy making and resource allocation. Clarity on the definition of "food security" was therefore essential to developing a consistent and coherent framework for policy responses, "*to eradicate food insecurity, hunger and malnutrition, consistent with the right to adequate food and the right to be free from hunger*", taking into account socio-economic and agriculture contexts.[8]

9. The original definition of "food security" was shaped by the conditions of food shortages in parts of war-torn Europe and reflected the aim of restoring production and market systems in Europe.[9] In the 1960s, the concept was expanded to include food security and nutrition of individuals. The World Food Conference (1974) – held in response to a food crisis that was provoked by a succession of production and market failures in the 1970s[10] - defined food security as the "availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices." The already existing institutional setup (FAO, WFP and IFAD) was expanded to include the UN/FAO Committee on World Food Security (CFS) and the Administrative Committee on Coordination Sub-committee on Nutrition (ACC SCN).

10. As from 1975, FAO began to argue that malnutrition is not simply a problem of food availability, but also a function of poverty and of deprivation. This argument directly linked malnutrition to overall development planning as it acknowledged that malnutrition could persist despite an increase in overall food supplies.

11. In the 1980s, after a series of poor grain harvests, the second world food crisis struck. In face of the failure of global food supply to guarantee security, the concept of food security was broadened to three specific goals: adequacy of supplies, stability in food supplies and markets, and security of access to supplies. In 1986, the World Bank[11] deepened the link between hunger and development by attributing both chronic hunger and transitory food insecurity to poverty, adapting its aid strategy to address factors that kept vulnerable households trapped in poverty

12. Starting in 1990, UNICEF distinguished between food and non-food factors (care and health) as essential elements for child nutrition, later institutionalized by the 1992 International Conference on Nutrition (ICN). In 2010, a range of stakeholders in the nutrition and health community (The Scaling-Up Nutrition (SUN) Movement) began to advocate for mainstreaming nutrition considerations into policy making.

13. The broadened understanding of what constituted food security led the agreement by the 2012 Committee for World Food Security[12] that:

"Food and nutrition security exists when all people at all times have physical, social and economic access to food, which is safe and consumed in sufficient quantity and quality to meet their dietary needs and food preferences, and is supported by an environment of

8. A consistent definition across disciplines and languages was found essential for enabling meaningful discussion on international and interdisciplinary level to deal with food security and improved nutrition related issues.

9. In 1943 forty-four Governments articulated for the first time (Hot Springs) the terms "food security" and "nutrition security" in the context as we know them today as topics for international action

10. Drawdown on global grain stocks, market shortages, rising food prices in many countries and a significant decline in per capita availability of grains and other starchy staples.

11. World Bank: "Poverty and Hunger: Issues and Options for Food Security in Developing Countries".1986

12. CFS, Coming to Terms with Terminology, Revised draft 25 July 2012.

adequate sanitation, health services and care, allowing for a healthy and active life."

3. Food security today

14. From 1990 to 2000, relative stability in the global food supply resulted in a period of complacency and reduced investment and innovation in food industries compared to other sectors. The exceptional food price hikes in 2008[13] brought back to the forefront the understanding that effective markets and national-level policy decisions are not sufficient for preventing major imbalances among nations and among specific vulnerable population groups, and that uncoordinated short-term national policies can result in destabilizing global impacts on prices and access to food in other countries. They were caused by a combination of very complex factors, such as[14] :

- *"Increased demand and global economic growth, especially in emerging countries such as China and India;*
- *The world's economic growth, especially in emerging countries such as China and India;*
- *An increase in the per capita consumption of meat and dairy products, the production of which requires an intensive use of feed grains;*
- *The reduction of the agricultural product inventory;*
- *The dollar devaluation;*
- *The expansion of biofuel production in Europe and the United States;*
- *"Panic" buying by some importing countries;*
- *The reallocation of investment portfolios to raw materials future markets, in many cases with speculative purposes;*
- *A slowdown in the growth of global agricultural production;*
- *The conversion of productive land for use in non-agricultural activities;*
- *The increase in water opportunity cost;*
- *Adverse weather phenomena in major production regions caused by climate change;*
- *Export restrictions imposed by major producer countries in certain periods;*
- *The rise in price of oil and other fuels, which increases agricultural production costs".*

15. These events highlighted that even though effective markets and national-level policy decisions could ensure adequate global and national food supplies, they are not sufficient to prevent major imbalances among nations and among specific vulnerable population groups. They also demonstrated that uncoordinated short-term national policies could have destabilizing global impacts on prices and access to food in other countries.

16. FAO reported in 2010 that while the global economic systems generated global food surplus, the number of hungry and food insecure people increased to nearly a billion people, falling short of the MDG target on poverty. Developing countries account for 98 percent of the world's undernourished people and, as of 2010, had a 16 percent prevalence of undernourishment. The number of malnourished people fluctuates depending on the overall economic situation: high food prices between 2003 and 2005 and in 2007–2008 were followed by a rapid increase in chronic hunger. The rapid increase in the number of hungry since 2010 is largely influenced by the global food and fuel crisis.

13. Food Security: A G20 Priority: "After one decade of relative stability in global food markets, the period after 2007 was marked by an ongoing increase in prices for the main agricultural products. The international food price index increased by 55.3% between September 2007 and September 2011. This increase basically occurred in two periods. The first was that of 2007 and the first quarter of 2008, when the food index increased by 61.6%. The world financial crisis and the subsequent reduction in aggregated demand led to a reduction in food prices compared to that period, but food price levels remained above those before 2007. The second food price increase period occurred between July 2010 and February 2011, when the index increased by 41.4%. The effect of agricultural product high prices has spread relatively rapidly to other sectors of the economy through the added value chain, a situation that has led to consumer price increases for a series of basic products in several countries, especially those made from corn, wheat, meat and dairies. Consequently, food price increases have, once again, become a global inflationary pressure factor with a particular impact on low-income population segments."

14. Several studies by Trostle, 2008; Mitchell, 2008; Headey and Fan, 2008; Rossett, 2008; Elliott, 2008 and poldev.revues.org/145

17. As result, a consensus is emerging of the need to reverse the stagnation of investment in agriculture. International and national policies have evolved, and bilateral agencies, financial institutions, foundations, equity funds and companies are again showing significant interest in investing in food industries in developing countries.

18. In developing countries, agricultural policies also seem to be changing, evolving from direct and indirect taxation to less taxation and protection. This is supported by a number of international and regional initiatives, such as the Aquila Food Security Initiative (AFSI) of the G8, or the Comprehensive Africa Agriculture Development Programme (CAADP). Russia, China and India also emphasize domestic agricultural productivity. Reform of agricultural trade policies will need to complement these initiatives.

19. The expectation today is that food prices will remain on a higher plateau in real terms compared to the previous decade and that volatility may continue to characterize agricultural markets.

4. Global trends impacting on food security during the forthcoming 30-40 years[15]

a) Desirable scenarios and challenges

20. FAO's projections indicate that:

- In order to feed the world population in 2050 the production of food will have to grow by 70%, whereby the demand in developing countries will be nearly threefold;

- The share of urban food consumption patterns that rely on complex and integrated food chains and a high share of animal products in global consumption patterns will increase, due to the increasing urbanization and rural-urban migration;

- Due to urban consumption patterns the share of food within the expenditure portfolio of urban populations will decline, while remaining high for populations living in rural areas;

- Food demand will increasingly be met through crop intensification, which can only be organized by complex commercially organized agro-industrial and food marketing chains;

- Interdependency between the agricultural sector and the energy sector will increase: the agricultural sector is a major user of fossil fuel products and energy, but is also becoming increasingly a source of energy products (biofuel). This will lead to greater competition between agricultural production for human consumption and for energy production; and

- That it should be technically feasible, considering the existing high productivity differential between research results and actual farm-level results, to meet rising demand.

21. The goals of increasing productivity and food availability will be challenged by climate change. The impact of climate change will not be uniform across the globe, and in terms of food production some regions will be positively and others negatively affected:

- Productivity in the agriculture, fisheries and forestry sectors will increase or decrease, as agricultural crops are sensitive to temperature variations depending on the region and will be affected differently depending on how climate change will impact on the ecological zones;

- Due to rising seawater levels some coastal areas will be flooded and no longer available for agricultural use or habitation;

- Global warming will further reduce glaciers in high mountains which are a key source for fresh water and essential for irrigated agriculture, animal husbandry and aquaculture in many regions;

15. This section relies heavily on the following document: http://www.fao.org/docrep/meeting/025/GT_WebAnnex_RC2012.pdf but there are many publications that mirror the same conclusions and that can be searched under the terms "food security and global impact" etc..

- Changing rainfall patters will influence agricultural productive capacity, including aridification of some areas;

- There are indications that the frequency of extreme climatic events (floods, hurricanes, drought) will increase.

b) Demand for food and agricultural products

22. By 2050, the global population is expected to grow to 9.3 billion, with a strong trend towards urbanization. FAO's baseline projections indicate that global food production in 2050 would need to increase by 70 percent to adjust to these changing demographics. FAO expects that it should be possible to meet the food demand of this projected world population, based on plausible assumptions on yield improvements and rates of expansion of land and water use.

23. With overall economic growth and a rise in individual incomes, the relative importance of agriculture, fisheries and forestry is expected to decline and become more interdependent and sensitive to changes and fluctuations in other sectors. With rising incomes, food demand is expected to shift to high-status (including fish and meat), non-seasonal, and processed foods.

24. These positive economic trends are expected to be accompanied by continuing inequalities between regions, both between and within countries. About two-thirds of the world's populations are expected to live in urban areas and follow urban consumption and dietary habits. Rural-urban income differentials are seen as a key driver for rural-urban migration, which often means the urbanization of poverty.

25. As a result, food insecurity will increasingly appear as an urban problem and will make it more visible and politically sensitive.

c) Natural resource base

26. Scenarios for 2050 anticipate the loss, depletion and degradation of soil and water resources, loss of biodiversity and loss of productive land to other uses, undermining national and global capacities required for enhancing food security and reducing poverty. The causes for diminishing quality and quantity of natural resources and loss of ecosystem are:

- Degradation, depletion, over-exploitation and pollution of natural resources;

- Climate variability and change, and natural disasters (e.g. flooding of coastal areas, erratic rainfall and prolonged droughts);

- Land taken out of production through abandonment due to civil strife, displacement, land mines, expansion of human settlements, and infrastructure and mineral extraction;

- The protection of ecosystems from human pressures by limiting access to their natural resources through environmental legislation and designation of parks and reserves.

27. Growing competition over natural resources may become a zero sum game if improperly managed. The drivers for increased demand for natural resources will be:

- Population growth;

- Increasing urbanization rates;

- Changing consumption patterns (such as growth in meat consumption) that require more land-intensive production;

- Bio-energy production;

- Increasing food demands for export as a result of globalization and food security concerns in investor countries;

- Growth of commercialized production of natural resources;

- Input and production subsidies to the agricultural sector, such as for energy, fertilizer, water and government purchase of production (which aim to promote production and food security but may promote the expansion of agricultural lands).

28. Most of the additional 70 percent in food production necessary to address population growth will have to come from agricultural intensification. Increasing productivity requires investment, technological innovation and policies, but crop intensification is highly dependent on fossil fuels, and most probably unaffordable to the majority of small farmers in developing countries. This will be a risk to the supply side of food security.

29. Commercial investments in food production are expected to focus on prime agriculture land or fisheries. Where formal property rights are weak, people using that land or fishery may be dispossessed and forced to use less productive resources, creating often-ignored social costs. Social safeguards are necessary to manage trade-offs between measures for economic growth and the need to protect vulnerable groups.

30. The expected population increases in poorer and less diversified developing economies, where agriculture will remain predominant, will put further pressure on natural resources, particularly in parts of Sub-Saharan Africa. This could also accelerate international migration.

31. Agriculture uses about 70 percent of the water resources of the planet. With the need to increase agricultural production to meet growing demand, pressure on water resources will increase. Competition between agriculture and non-agricultural uses of water will increasingly become an issue.

32. Reduction of post-harvest losses is seen by FAO as a compensating strategy to deal with the impact of reducing natural resources on overall production.

d) Agriculture and energy

33. Agriculture requires energy. Modern agriculture relies on chemical fertilizers derived from fossil fuels and machinery. Food storage, processing and distribution are also energy intensive. Higher energy costs directly impact agricultural production costs and food prices.

34. Bioenergy can also be an output of the agrifood chain. Biofuel production is stimulated through government subsidies, tax incentives and mandates (particularly in the G20 countries), which remain important drivers for most types of biofuels. Agricultural land that is used for bioenergy is not available for food production.

e) Research and Development (R&D)

35. The gap between average farm yields and the yields obtained in experimental fields is considerable, but reaching this potential requires that farmers operate in well-functioning input and output markets; have access to efficient infrastructures; have better finance and risk management tools; and work under a framework of appropriate policies and institutions.

36. Global investment in agricultural R&D has increased in the last three decades, with a rising share invested by the private sector. Private investment in R&D is concentrated in a few developed countries and a handful of rapidly emerging countries. The emergence of biotechnology as a major source of innovation in agriculture will have major consequences for small farmers. Intellectual protection instruments, particularly in the seed sector, are increasingly important. The role of public extension services is declining, while the role of the private sector in the dissemination of technologies and practices is growing.

37. With these changes, Africa is of special concern. There will be an increasing need for public policies, public investments and partnerships with the private sector to ensure a more universal utilization of innovations for increasing food production and poverty reduction. Yield gains, food security, and sustainable

management depend on policies and institutions. Appropriate public policies, supplemented by infrastructures and institutions, are required to ensure and regulate the access of smallholders to technical progress generated by investments of the private sector.

38. Agricultural research is essential for meeting the needs of a growing population. Increasing demand for food can only be met by more intensified production which is dependent on research and innovation, as well as on reduction of losses and waste along the food chain which requires awareness, research and management. The share of agricultural research that is managed and funded by private corporations is increasing; their research focus is dominated by corporate interests and not necessarily by the needs of vulnerable population groups without resources and income that would enable them to participate in the formal food sector. Funding for agricultural research that aims at supporting weak smallholders and vulnerable population groups depends on the public sector. However, with shrinking government budgets worldwide, the share of research in support of smallholders in developing countries is declining.

f) Agricultural productions systems

39. Food production systems are going through a strong vertical integration process at the national and global levels through the development of large and complex global value chains. Food production chains have become longer, more complex and transnational in all regions. Foreign direct investment plays a key role in this process, generating income opportunities, but also speeding up concentration and technical change and competing with or and even displacing more traditional production systems.

40. Integrated food chains, managed by highly concentrated agro-industrial (often multinational) firms, are expected to increasingly expand into developing countries, integrating their agricultural producers into industrialized global or regional marketing chains. Agro-industries require standardized products and timeliness for processors and retailers to remain competitive and an adequately skilled workforce. Contract farming - particularly for horticultural crops - link farmers to large food chains for which standards and compliance are key variables. These production chains and the institutional framework in which these firms operate are designed for the international and urban markets. With the increased demand for processed food products and season-independent food supplies, other dimensions such as management, marketing, information, logistics, food safety and quality standards become relevant.

41. Established local firms and small primary producers may find it difficult to integrate with such modern agrifood production chains that demand adherence to stringent quality standards, particularly when adaptation requires capital and variable input use, and to manage related risks too difficult to handle. Small-scale fishing communities face similar conditions.

42. There is a trend towards increasing farm size, especially in developing countries and emerging economies in land-abundant regions, and a shift from small-size family farming to large-size enterprises based on hired labour and higher capital intensity.

43. National governments, particularly in smaller or developing countries, are challenged by the increasing economic interdependency and transnational character of private investment. International and national institutions need to define and enforce regulatory policies that shape the national and international economic environment, to counteract market failures in the area of competitiveness and anti-trust, to manage information asymmetries between consumers and producers, as well as to protect the environment and address global environmental challenges and manage resources such as land, water and biodiversity.

g) International agricultural and fisheries trade

44. Rules governing international trade of agricultural products have evolved considerably over the last four decades, consistent with the changing balances within the world economy. Until the 1980s major parties involved in negotiations were OECD countries. Along with the multilateral framework, agricultural trade developed along a discriminatory set of bilateral and regional agreements that applied different conditions to different trading parties, legally based on exceptions allowed by WTO rules.

45. Developing countries and a number of large emerging economies (including some that are part of the G20 group) are playing a prominent role in the Doha round[16], corresponding to their increasing economic and political power. The current set-up can be described as a mix of multilateral and bilateral/ regional trade regimes.

46. Private standards adopted by companies involved in international trade are becoming more relevant and stringent than public provisions. Given the sensitivity of food and agricultural products and their direct linkage with health, consumers have become increasingly willing to pay for safety characteristics, especially in developed countries. Private companies, consequently, have had increasing incentive to raise the level of standards.

h) The role of climate change

47. The effects of climate change are expected to intensify over the decades to come, in spite of the mitigating measures underway. Given the degradation in dry lands and increased frequency of natural disasters, adaptation to climate change for agriculture requires medium- and long-term investments for irrigation, livestock and plant breeding, forestry etc.

48. Even though the real effects of climate change on agriculture, forestry and fisheries are difficult to predict, it is expected that their impact will be different for each region, ecological zone and production system. Even small changes in the climate, e.g. through small changes in annual rainfall or in seasonal precipitation patterns, can impact on productivity:

- The frequency and intensity of severe weather events such as floods, cyclones and hurricanes as well as of prolonged drought and water shortages will increase. Soil quality will be directly affected;

- Changing temperatures will lead to changes in the location and incidence of pest and disease outbreaks, and approximately 20 to 30 percent of plant and animal species are expected to be at increased risk of extinction;

- The melting of glaciers and snow cover from major mountain ranges will reduce availability of water for irrigation downstream;

- Increasing temperatures, changing precipitation patterns, and more frequent and intense extreme weather events will impact the production and productivity of food and feed crop and livestock, fisheries and aquaculture;

- Forests and rangelands will be sensitive to climate variations, weather extremes and long-term changes.

49. Agricultural production also contributes to global warming through greenhouse gas emissions from the entire food chain which account for approximately 20 percent of total emissions.

i) Impact of climate change: change of production systems and natural disasters[17]

50. As a consequence of climate change, entire regions will have to adapt their food production system. Food producers will either adopt new or changing production techniques, or if not feasible, move to other income-generating activities. This will reinforce the ongoing rural-urban migration, and transform

16. www.wto.org/english/tratop_e/dda_e/dda_e.htm: The Doha Round is the latest round of trade negotiations among the WTO membership. Its aim is to achieve major reform of the international trading system through the introduction of lower trade barriers and revised trade rules.

17. See also scenarios.globalchange.gov and www.guardian.co.uk/global-development/2013/apr/13/climate-change-millions-starvation-scientists

food producers into food consumers. In those regions where the rural-urban migration does not provide opportunities for income generation, South-North migration across nations and continents will be an attractive option and intensify.

51. If the incidence of major natural disasters (floods, hurricanes, pests, drought, etc.) rise, agricultural producers who are not able to invest in insurance or preventive/mitigating measures or who cannot benefit from related national programmes will be faced with loss of their production base and/or capacity. Small-holders will be particularly affected by food insecurity. Extreme events will have a reinforcing effect on migration movements.

52. The Fukushima disaster in Japan demonstrated the global implications of catastrophic events, and the need to establish renewable sources of energy. Other risks are the incidence and spread of transboundary plant pest and animal diseases resulting from the increasing volume in trade and travel.

53. Finding effective ways of reducing and managing natural and man-made disaster risks is a challenge for most governments. In particular countries with weak governance, political instability or in conflict (complex emergencies or protracted crises) are likely to find it difficult to address underlying drivers (i.e. degradation of hazard-regulating ecosystems such as wetlands; mangroves and forests; high levels of poverty and political/economic marginalization; badly managed urban and regional development; etc.).

54. Increasing resilience of food production systems, including support in system recovery, will mitigate some of the anticipated effects of climate change. Adaptation strategies include crop diversification, better water use efficiency and resistance to pest/disease, and lower yield variability. This requires access to technologies, crop varieties and animal breeds that can be productive in changing conditions. Mitigation also requires capacity building to enable producers and governments to cope with these change processes.

55. The multiple threats to food and nutrition security, their negative and cumulative impact, and the clear links between shocks and hunger reveal the fragility of current food production systems and their vulnerability to disasters, crises and conflicts. Adapting to climate extremes and change requires increased attention to underlying conflict and disaster risk drivers, reducing vulnerability and strengthening governance capacities. If disaster risks can be reduced, then the magnifying effect of climate change will also be reduced and adaptation will be facilitated.

56. Crises and disaster risk reduction and management for food and nutrition security are vital for ensuring "the right to food and freedom from hunger". At global, regional, national and local levels, coherent interventions and systems are needed as a preventive strategy to build, protect and restore livelihoods of farmers, herders, fishermen, foresters and other vulnerable groups against various shocks.

B. Collective responses of the international community

1. Evolution of positioning of UN food agencies

57. Institutional stakeholders for food security include international and national corporations, the informal private sector, civil society, NGOs, private foundations and governments. Individuals as consumers and producers are central to these mechanisms. Effective governance of food security at global, regional and national levels requires that the full range of stakeholders, including vulnerable populations, are involved actively in work related to standard setting and policy, and in the formulation, implementation and monitoring of regulatory frameworks. Food security goes well beyond the agriculture sector, and includes cross-cutting issues, such as gender and the environment.

58. FAO was originally established as an intergovernmental body to promote[18] the "*common welfare by furthering separate and collective action for the purpose of*

18. Preamble of FAO's Basic Texts: www.fao.org/docrep/meeting/022/K8024E.pdf

raising levels of nutrition and standards of living of the peoples under their respective jurisdictions; securing improvements in the efficiency of the production and distribution of all food and agricultural products; bettering the condition of rural populations; and thus contributing towards an expanding world economy and ensuring humanity's freedom from hunger".

59. It is significant that the major players at the time of FAO's establishment were the governments. Its design envisaged that most of its work would be conducted through statutory bodies or commissions, many operating under joint oversight with other UN agencies.

60. Other stakeholders (i.e. NGOs, CSOs and the private sector)[19] that have become vocal defenders of consumer and producer rights and interests were associated as observers. There is an increasing involvement of non- governmental stakeholders, with some establishing formal advisory or consultative mechanisms, including private sector companies. Fostered by the revolutionary progress in information technology and global transport - and supported by immense low-cost labor markets in many formerly developing countries – global transnational corporations have also become relevant players with standard setting and normative standard power to support their corporate goals.

61. The number and types of associations, networks and partnerships that address food and agriculture systems are on the rise. This is linked to calls for global governance mechanisms and platforms related to food security, agriculture, natural resource management and biodiversity.[20]

62. Considerable work is underway in the field of research and knowledge generation relating to food systems and climate change, through scientific, transparent and open processes designed to include different stakeholders.[21] At the same time, the human rights based approach to the "Right-for-Food" changed the focus and is putting the individual at the center of all development policies. Through it the rights of individuals for food are not only respected, protected and fulfilled[22] but it will also become a dynamic driver for policy and governance related to food security issues.

63. The modalities of governance are gradually shifting towards increasingly participatory and decentralized processes with heightened focus on national priorities. At the same time, the nature of current global challenges is cross-cutting, transcending national and regional boundaries and increasingly requires increased multi-stakeholder and intergovernmental platforms to achieve global consensus. Consequently, national and international non-governmental organizations dedicated to food and hunger issues claim a prominent place in the public debate of all aspects of food security, often pushing national governments and intergovernmental mechanisms to action.[23]

64. This trend profoundly impacts on the Rome-based UN food agencies, which had to adjust from being the central actors in food security governance to having to share this role with other players in a multi-stakeholder system and required them to question how their specific comparative strength as neutral intergovernmental fora could be used to maximum

19. Examples include the Codex Alimentarius and FAO Committee on Commodity Problems, International Code of Conduct on the Distribution and Use of Pesticides, the Rotterdam Convention and Advisory Committee on Paper and Wood Products. There are also other types of existing international commitments, such as the Voluntary Guidelines to support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security.

20. Specific and recent examples include requests to create global governance structures that relate to FAO's work such as: the request to the CFS to create an International Observatory on Land Tenure; the call by the G-20 to create a global agricultural marketing information system (AMIS); requests to focus on issues related to fisheries, aquaculture and oceans, through the GEF Areas Beyond National Jurisdiction (ABNJ) project, or review the governance of UN Oceans; the agreement to establish an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES); the creation of a UN system-wide accountability framework on gender to focus on progress on calls for gender equality; development of Voluntary Guidelines on Responsible Governance of Tenure of Land and other Natural Resources; development of the Principles for Responsible Agricultural Investment; International Guidelines for the Governance of Tenure in Land, Fisheries and Forestry and the Voluntary Guidelines for Small-Scale Fisheries.

21. There has been a progressive development of science and policy interfaces at national and international levels, most notably on environmental issues such as climate change (IPCC), ecosystems (Millennium Ecosystem Assessment) and also in agriculture (IAASTD), and now in food security with the creation of the High Level Panel of Experts for food security and nutrition. A growing commitment to evidence based analysis to underpin decision-making processes is also reflected in regional and national development initiatives, such as the Comprehensive Africa Agriculture Development Programme (CAADP). Another example is the Commission on Genetic Resources for Food and Agriculture which serves as intergovernmental forum dealing with biodiversity for food and agriculture through the lens of food and nutrition security. Its work resulted in several global instruments, e.g. International Treaty on Plant Genetic Resources for Food and Agricultural, harmonized with the Convention on Biological Diversity, and agreed on Global Plans of Actions on Genetic Resources.

22. Translated into practical terms, this means safeguarding or improving vulnerable people's access to natural resources through fairer tenure systems, better knowledge and communication, and application of the principle of Free, Prior and Informed Consent (FPIC) in relation to resource management decisions.

23. A good example is the current campaign by one international NGO against speculations in food commodity markets: www.oxfam.org/en/grow/pressroom/reactions/european-parliament-draws-line-sand-financial-markets-must-not-play-food

effect. This was the focus of the Independent External Evaluation of FAO[24] , launched by its Members in 2008 and which resulted in FAO's fundamental restructuring and reorientation.

65. The proliferation of stakeholders in food security also means that the FAO, IFAD and WFP (as the only intergovernmental bodies dedicated entirely to food security issues), may have to adapt and reposition themselves to:

- Increase collaboration and partnership with other stakeholders (other UN agencies, civil society, private sector, other DPs);
- Support capacity development to increase countries' ability to lead, prepare, implement and evaluate effective national policies, strategies and investment plans and programs in relation to agriculture and food security at the outset;
- Include key civil society stakeholders and producer organizations to allow them to become effective collaborators in national strategy and program design and implementation;
- Engage in the global processes and bring global insights to bear on its country support and country work;
- Support countries in establishing sound, inclusive and coherent governance systems for agriculture and food/nutrition security from the local levels to the national and global levels;
- Support national stakeholders in resource mobilization efforts relating to agriculture and food/nutrition security with development partners and from national budgets;
- Anticipate and accommodate calls for global governance mechanisms involving a growing number of stakeholders from a wider variety of sectors;
- Support implementation and monitoring of global governance mechanisms/guidelines, to prepare to scale up capacity to understand its potential monitoring role.

24. ftp.fao.org/docrep/fao/meeting/012/k0827erev1.pdf.

66. The new Strategic Framework of FAO[25] (2013) with its new focus on governance, creation of enabling environments and policy support in Member countries is the direct outcome of this adaptation and repositioning process.

2. The UN within the context of changing development paradigms

67. One of the central principles of sustainable development is national ownership of country strategies and programs. A key achievement of the aid and development effectiveness debate[26] has been their adoption by development actors[27] as parameters for their work. Many development partners have decentralized decision-making processes and some budgetary authority, allowing their country offices much greater autonomy in determining how to provide support and with whom to engage.

68. The UN system was designed as a collaborative effort by its Member States to deal with global and transnational issues, and to facilitate and manage knowledge exchange. However, the world has changed fundamentally with the ongoing globalization process and the emergence of new powerful stakeholders. New implementation modalities and processes for food security continue to emerge in this evolving development context, characterized by (1) the increasingly important role of UN Regional Economic Communities (RECs); (2) increasing need at national level for institutional capacities in planning/policy design and implementation; and (3) decentralization by the development partners, including the UN development system agencies.

25. www.fao.org/docrep/meeting/027/mg015e.pdf.

26. Commitments in the HLFs have evolved from a focus on aid effectiveness to development effectiveness which places responsibilities to a much greater extent at the country level. The 2002 Rome Declaration focused on commitments by development partners to align to country programs. The Paris Declaration in 2005 broadened commitment to alignment and harmonized support to country owned processes and put the emphasis on mutual accountability, between countries and development partners, thereby expanding responsibilities at the country level. The Accra Agenda for Action (AAA) in 2008 added the focus on partnerships at country level, including civil society, thereby broadening the national constituency that is explicitly considered as stakeholders in the country-led agenda. Civil society was also represented at the Accra Forum for the first time. The AAA further emphasized the need for capacity development to strengthen countries' ability to manage their own future. The Busan Outcome Document (2011), advocates for a shift from aid to development effectiveness thereby further strengthening the role of national parties.

27. Decisions of the four High Level Fora (HLF) on aid effectiveness in Rome (2002), Paris (2005), Accra (2008) and Busan (2011).

- The RECs play an increasing role in supporting countries in their development efforts, particularly for trans-boundary plant pest and diseases, phytosanitary measures, management of shared ecosystems or transboundary waters or trade in food and agricultural products (e.g. ECOWAS in West Africa, IGAD in the Horn of Africa, ECO in South Asia, and CARICOM in the Caribbean).

- At country level, existing frameworks (e.g. poverty reduction strategies, as well as agriculture and food security frameworks) need to be amended and strengthened to support effective agricultural development and progress in achieving food security; they may not adequately address multi-sectoral approaches to food security and a common vision of priority investments.

- Regions and countries have put in place tools to enhance their country-owned, coordinated and inclusive actions in support of agricultural development. Examples at the program level include the Comprehensive Africa Agriculture Development Program (CAADP) of the African Union that was endorsed by African heads of state in 2003 as a common framework, tool and process for the restoration of African agriculture in pursuit of MDG 1[28]. There is increasing recognition of the importance of the participation of non-state-actors such as producer organizations and the wider private sector, as well as civil society organizations in CAADP processes.

69. The UN system has to reassess its assets and redefine its role — in light of the challenges of globalization, population growth and climate change – to go beyond the traditional assistance and technical cooperation role to one that identifies, defines and links knowledge and expertise and that leverages its convening power to incorporate the other stakeholders (private sector including transnational corporations, NGOs and CSOs).

28. Within the framework of the New Partnership for African Development (NEPAD).

3. Global governance as key to resource management and issue resolution

70. The cross-cutting nature of emerging national and regional priorities requires commensurate support from the multilateral system - that transcends national and regional boundaries - and a response to the increasing call for increased multi-stakeholder and intergovernmental platforms to achieve global consensus. The conflicting interests[29] between the full range of different stakeholders, from the local small-scale producer through to the national, regional and global levels need to be reconciled in order to deal effectively with cross-cutting issues. At the same time, the modalities of governance are shifting increasingly towards participatory and decentralized processes and heightened focus on national priorities.[30]

71. Global governance and the delivery of global public goods (GPGs) are therefore essential underpinnings for achieving commitments that were made in support of country-led development processes. Global governance does not mean, however, central planning or management mechanisms or processes, but an agreement on key principles that should drive decision making by independent and autonomous decision makers, whether they are within national governments or international corporations.

4. The Way Forward: recognition of the Need for Enhanced Global Governance for Food Security[31]

72. One of the consequences of the 2007/08 food price crisis was an implicit acknowledgement:

- That the institutional framework established after World War II and after the 1970s energy crisis was no longer adequate to deal with the dynamics of a changed economic and institutional environment, including the new global scale of food production systems, and

29. FAO, C2013/7: "Governance refers to formal and informal rules, organizations and processes through which public and private actors articulate their interests and implement decisions". The World Bank defines governance as: "the manner in which power is exercised in the management of a country's economic and social resources for development". Alternate definitions sees governance as: "the use of institutions, structures of authority and even collaboration to allocate resources and coordinate or control activity in society or the economy", or the "proper functioning of institutions and their acceptance by the public" (legitimacy). And it has been used to invoke the efficacy of government and the achievement of consensus by democratic means (participation)."

30. See also: foodgovernance.com/global-governance/

31. Source: www.fao.org/fsnforum/forum/discussions/global-governance: Global Governance for Food Security: are the current arrangements fit for the job?

- That in the 21st century food market and production failures in the food and agriculture sector can threaten the global economy as well as destabilize entire nations.[32]

73. The response by world governments – largely ad-hoc - was characterized by the establishment of a variety of global institutional mechanisms and processes, and a new model for dealing with food insecurity issues is emerging.

74. In April 2008 the UN Chief Executives Board established a **High-Level Task Force (HLTF) on the Global Food Security Crisis**[33], which brought together, under the leadership of the UN Secretary-General, the heads of the UN specialized agencies, funds and programmes, as well as relevant parts of the UN Secretariat, the World Bank, the International Monetary Fund, the Organization for Economic Cooperation and Development, and the World Trade Organization.

75. The primary aim of the HLTF was to promote a comprehensive and unified response to achieving global food security, by facilitating the creation of a prioritized plan of action and coordinating its implementation. The result was the **Comprehensive Framework for Action (CFA)** agreed to in 2008, that was designed to encourage concerted responses to the food price crisis by meeting the immediate needs of vulnerable populations and by building at the same time longer-term resilience (the twin track approach). This CFA provided governments, international and regional organizations, and civil society groups with a menu of policies and actions from which to draw appropriate responses, with focus on improving the productive capacity of smallholder farmers[34], especially women. Against the backdrop of the economic crisis, this concept was expanded to include nutritional security of vulnerable groups.[35]

76. Since the creation of the HLTF and release of the CFA, there has been a massive effort from the international community to encourage greater investment in food and nutrition security, through national budgets and external support from donors and development banks. Governments have not only increased the share of national budgets devoted to related issues, but have also recognized the need to address food security issues multilaterally through several initiatives:

- Leaders at the 2008 G8 meeting (**Tokyako Statement on Global Food Security**) stated their commitment to pursue all possible measures to ensure global food security, and recognized the coordinating role of the UN through their support for the HLTF. They also encouraged countries with surplus to release food stocks and called for the removal of export restrictions (G8 2008).

- At the G8 L'Aquila Summit (2009), heads of state of twenty-six nations and representatives of fourteen international and regional organizations declared the need to increase agricultural production, announcing the **"L'Aquila" Food Security Initiative**[36] (AFSI). This AFSI was reinforced through the "L'Aquila" Joint Statement on Global Food Security, through which $22 billion were raised over a three-year period for agricultural investment.[37] The approach centered on five principles: investment in country-led plans and processes; comprehensive policies that include support for humanitarian assistance, sustainable agriculture development and nutrition; strategic coordination of assistance; a strong role for multilateral institutions; and sustained commitment of financial resources.

32. See also, "The Food Crises and Political Instability in North Africa and the Middle East, Marco Lagi, Karla Z. Bertrand and Yaneer Bar-Yam, New England Complex Systems Institute, 2011.

33. www.un.org/en/issues/food/taskforce/index.shtml

34. Small-holder farmers - defined as those marginal and sub-marginal farm households that own or/and cultivate less than 2.0 hectare of land. Sources: wiego.org/informal-economy/occupational-groups/smallholder-farmers and www.fao.org/docrep/005/ac484e/ac484e04.htm.

35. It was found that the prevalence of under-nourished children remained high even where communities experienced increases in overall food production.

36. Twenty-six nations and fourteen international organizations

37. www.feedthefuture.gov/resource/laquila-food-security-initiative-final-report-2012.

- The **World Summit on Food Security** (Rome 2009) built on the AFSI approach with its "Five Rome Principles for Sustainable Global Food Security".[38] Particular emphasis was given to investment in country-owned plans.

- The pledges made through the L'Aquila Food Security Initiative led to the establishment of the **Global Agriculture and Food Security Program (GAFSP)[39] Trust Fund**, a multilateral financing mechanism run through the World Bank focused on the achievement of MDG1. Its objective was to address the underfunding of country and regional agriculture and food security strategic investment plans already under development. Launched by the UN Secretary-General (Madrid 2009), its mandate was on building on existing structures and supporting the implementation of the CFA, through work at global and national levels. It consists of a public and private sector window and reports to have received commitments of USD1 billion (March 2013) from eight donors including the Gates foundation. The GAFSP works with existing processes and institutions and is coordinated by a secretariat, housed at the International Fund for Agricultural Development (IFAD) in Rome and formed by the HLTF.

- The **Framework for Scaling-Up Nutrition (SUN)[40]** is a multi-stakeholder movement (Washington April 2010) focusing on nutrition-specific interventions and actions during the first 1000 days of individual growth. It advocates incorporating specific pro-nutrition actions into other sectors and development areas such as health, food security and agriculture, gender, social protection, education, and water and sanitation, and includes marginalized populations, especially women. Its aim is to support SUN countries in realizing national nutrition goals and targets, including the MDG-1 target. Many countries have also developed specific nutrition targets for the years beyond 2015. SUN is led by a high-level, multi-stakeholder Lead Group appointed by the UN Secretary-General. The SUN movement has developed considerable momentum: starting initially with three countries in mid-2012, by early 2013, 34 countries have signed up and over 100 organizations and entities have signaled their support.

- One of the most important actions by the international community has been the reform and transformation of the **Committee on World Food Security (CFS)**.[41] The CFS was set up in 1974 as an intergovernmental body for review and follow-up on food security policies. In 2009 it was reformed to become the most inclusive international and intergovernmental platform for all stakeholders of food and nutrition security to work together in a coordinated way. Even though the reform was triggered by the 2008 food crisis, it enabled the CFA to also deal with long term structural issues. The CFS reports annually to Economic and Social Council of the United Nations (ECOSOC) and the expectation is that Member States participate in CFS sessions at the highest level possible. In practice, participation is very wide-ranging with participants from UN agencies and bodies, civil society and non-governmental organizations and their networks, international agricultural research systems, international and regional financial institutions and representatives of private sector associations and private philanthropic foundations. It is supported by an independent High Level Panel of Experts on Food Security and Nutrition (HLPE) (established 2009), which was introduced as an essential part of the CFS reform. The CFS, along with the HLPE, has also been described as a "central component of the evolving GAFSP" providing the political and scientific arms of the partnership, while the GAFSP provides its financial arm. The reformed CFS has begun work on several important topics including food price volatility and voluntary guidelines on land tenure.

38. "In November 2009, the World Summit on Food Security in Rome adopted the "**Five Rome Principles for Sustainable Global Food Security**" based on the "L'Aquila Joint Statement on Global Food Security" issued at the G8+ Summit 2009: **Principle 1**: Invest in country-owned plans, aimed at channeling resources to well-designed and results based programmes and partnerships. **Principle 2**: Foster strategic coordination at national, regional and global level to improve governance, promote better allocation of resources, avoid duplication of efforts and identify response gaps. **Principle 3**: Strive for a comprehensive twin-track approach to food security that consists of: 1) direct action to immediately tackle hunger for the most vulnerable and 2) medium- and long-term sustainable agricultural, food security, nutrition and rural development programmes to eliminate the root causes of hunger and poverty, including the progressive realization of the right to adequate food. Principle 4: Ensure a strong role for the multilateral system by sustained improvements in efficiency, responsiveness, coordination and effectiveness of multilateral institutions. Principle 5: Ensure sustained and substantial commitment by all partners to investment in agriculture and food and nutrition security, with the provision of necessary resources in a timely and reliable fashion, aimed at multi-year plans and programmes. These serve as a basis for turning political commitments into action and outcomes at community level." Source: Updated Comprehensive Framework for Action, HLTF, 2009

39. www.gafspfund.org/gafsp/content/global-agriculture-and-food-security-program

40. scalingupnutrition.org/

41. www.fao.org/cfs/cfs-home/en/

77. At the end of 2009 the HLTF, recognizing the proliferation of bodies working on issues related to food and nutrition security, requested an update of the CFA to better reflect ways in which UN System bodies advise and interact with national authorities and numerous other stakeholders. This **Updated CFA (UCFA)** continues to follow the twin-track approach, but covers in more detail all aspects of food and nutrition security and prioritizes environmental sustainability, gender equity, the prerequisites for improved nutrition and the needs of those least able to enjoy their right to food. It also acknowledges that private sector, CSOs and NGOs have a critical role for ensuring food and nutrition security.

5. Embedding food and nutrition security into the global agenda

78. Food and nutrition security were part of the global agenda since the establishment of the UN system, but until the agreement on the MDGs it was relegated to the mandates of dedicated and specialized agencies (FAO, IFAD, WFP). While local and regional food crises in Africa since the mid-seventies proved that food security had broader humanitarian, security and development implications, wealthier countries viewed it as an issue requiring compassion, but not one that impacted on their national policies or security. Poverty issues were handled through national welfare and safety nets, and agricultural policies were designed to generate massive surpluses that were then transferred to needy developing countries, often even destabilizing local production systems.

79. The UN organizations and mechanisms developed in response to the mid-seventies' crisis were ultimately neutralized, partially because of related economic interests and because the east-west conflict overshadowed every scope for global action. With the collapse of the Soviet Union and the opening up of China, and the emergence of Brazil, China and India as dynamic economic powers, the global context changed completely, culminating in the expansion of the originally G7 to G8 and then to the G20 that includes several of the emerging large economies.

80. With poverty and hunger eradication ranking first in the MDG agenda, these issues moved out of the niche of dedicated agencies and became a responsibility of the broader UN family but remained still an issue of compassion rather than of global strategic importance.

81. The 2008 food price hikes forced recognition of food security's broader implications. In combination with increased understanding of the potential threats of climate change to production systems and patterns, the topic of food and nutrition security as one that impacts global and national security has moved to the center of global attention and management, in a wide range of fora.

82. All major inter-governmental consultative processes and mechanisms now have food and nutrition security as a standing item on their agenda, whether it is the OECD, the World Economic Forum, the European Union, the G8/G20 or the UN.

- Since the food price crisis in 2008, the issue of food security has become a standing item of the consultations of the **G8/G20**, resulting in position papers and policy commitments, as well as in the engineering of an updated governance system of food security involving the UN system agencies. The G20's "Action Plan on Food Price Volatility and Agriculture" (2011) seeks more efficient global and national agricultural policies, increased international coordination, and specific measures to promote food security and sustainable agricultural production. Increasing food production is seen as a solution to reducing price volatility (through an increase in productivity, better market information systems, greater trade openness and more sustainable agricultural, rural development and investment policies). It is significant that for its implementation the G20 relies on national as well as various international institutions, including the CGIAR, the World Bank, FAO, WFP, the United Nations, WTO as well as the OECD.

- In order to get price volatility for food commodities under control, the G8/G20 tasked several intergovernmental organizations (World Bank, FAO and OECD) to launch an **Agricultural Market Information System (AMIS)**,

which is now coordinated by FAO and the International Grain Council[42] (IGC). The action plan specifically recognizes the role of the UN, and in particular of FAO, in the global food security governance architecture. The plan also identifies biofuels as a potential issue requiring further analysis, and promotes the establishment of national "safety networks" to mitigate the effects of price volatility on private households, tasking WFP to conduct a feasibility study for establishing a humanitarian emergency reserves system.

- The **World Bank**[43] has responded to the food crisis in coordination with development partners, including by contributing to several agricultural and food security working groups and drafting recommendations for the G20. The Bank is also actively engaged with the HLTF. The World Bank, through the GFRP Secretariat, actively participated in the updating of the UN's CFA. It also regularly participates in the Multilateral Development Banks' (MDB) Working Group on Food and Water Security.

- The **OECD** has a specific focus on agriculture and food security. It supported the respective presidencies of the G8/G20/AFSI sessions on issues related to food security, food price volatility and agricultural productivity. It is also involved in the UN HLTF on food security, and participates in the Global Donor Platform on Rural Development. The recent annual meetings of its Global Forum on Agriculture[44] in 2011 and 2012 had as focus poverty reduction and policy coherence for food security in developing countries.

- Food security is a priority area for the **European Union**. Its focus is on three dimensions: availability of food at regional and national levels, access to food by households and food use and nutritional adequacy at the individual level. In its policy on food security (2010) the EU laid out a comprehensive framework to step up investment in sustainable agriculture and to improve access to adequate and nutritious food. This is in parallel to humanitarian food assistance that allows for a menu of context-driven tools (e.g. food aid, cash and vouchers etc.). Moreover, agriculture and food security were identified as key areas for promoting inclusive and green growth in partner countries. The EU programme cooperates with three UN agencies (FAO, WFP, IFAD), depending on their role and mandate, and also supports all other multilateral mechanisms of the UN system that deal with food security related issues.[45]

- The initiatives by the G8/G20 are matched by the agreement of the **BRIC** countries[46] , representing 43% of world population and 18 percent of global trade and commanding significant global influence. In their first meeting (Moscow 2010) the Ministers of Agriculture and Agrarian Development of the BRIC countries laid the groundwork for an action plan (2012-2016) relating to agricultural cooperation with focus on the creation of an agricultural information base system; the development of a general strategy for ensuring access to food for the most vulnerable population; the reduction of the negative impact of climate change on food security and adaptation of agriculture to climate change; and enhancing agricultural technology cooperation and innovation. Subsequently (Chendu, China, 2011) the action plan was approved and the BRICS countries adopted "Making Joint Efforts for World Food Security" as a central theme and committed to enhance coordination and communication with international and regional organizations, including G20, FAO, WFP, OIE, CGIAR, etc. The BRIC countries consider agriculture as a strategic sector with a close bearing on social stability, and draw specific attention to the food security situation in Africa. They specifically declared their support to the coordinating role of the UN in preventing further deterioration of the crisis, especially through the FAO's Committee on World Food Security (CFS).

42. www.igc.int/en/aboutus/default.aspx: The International Grains Council (IGC) is an international organization established on March 23, 1949 as the International Wheat Council (IWC) for the purpose of egalitarian distribution of wheat to countries in a state of emergency. In 1995 it was renamed International Grains Council. The IGC consists of all parties to the Grains Trade Convention and it functions are to oversee the implementation of the GTC; to discuss current and prospective world grain market developments; and to monitor changes in national grain policies and their market implications. The GTC applies to trade in wheat, coarse grains, (maize (corn), barley, sorghum and other grains) and rice.

43. www.worldbank.org/foodcrisis/bankinitiatives.htm

44.www.oecd.org/agriculture/agriculturalpoliciesandsupport/monitoringfarmsupportandevaluatingpolicy/oecdglobalforumonagriculture2011.htm

45. ec.europa.eu/europeaid/what/food-security/index_en.htm

46. The BRIC [Brazil, Russia, India and China] idea was first conceived in 2001 by Goldman Sachs as part of an economic modeling exercise to forecast global economic trends over the next half century; the acronym BRIC was first used in 2001 by Goldman Sachs in their Global Economics Paper No. 66, "The World Needs Better Economic BRICs". In 2010, with inclusion of South Africa the BRIC were expanded into BRICS. Four BRIC(S) Summits have been held so far; Russia (2009); Brazil (2010), China (2011) and India (2012).

- The **Private Sector** is involved in food security governance and dialogue with multilateral organizations through a variety of mechanisms. The private sector grouping that seems closest to the UN system is the **UN Global Compact**. This is a strategic policy initiative to provide a forum for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption. However, while environmental sustainability is part of their explicit agenda, including through involvement with the Rio +20 conference, they have not been explicitly active in the field of food security. Another mechanism that is close to the food and agriculture sector is the **International Agri-Food Network (IAFN)** (created 1996), an informal coalition of international trade associations involved in the agri-food sector at the global level. It represents the agri-food business group in a number of international settings, such as the CFS, and its members include international companies and national associations representing small and medium enterprises, co-operatives and farmers from 135 countries.

- The reputed **World Economic Forum (WEF)**[47] also lists agriculture and food security as one of its lead topics. Through its "New Vision for Agriculture initiative" it works on developing a "shared agenda for action" and fostering "multi-stakeholder" collaboration to achieve sustainable agricultural growth through market-based solutions." This highlights agriculture as pivotal to sustainable development, economic development, and food security, as it raises productivity, incomes and employment. It argues that there is a need for shifting from a philanthropic approach to treating agricultural development as a market investment, creating a system where stakeholders have "*the incentive to innovate, resilience to endure risk and capital to invest in growth*". The initiative works at the global level with the G8 and G20, and facilitates national-level partnerships in the field of agriculture in 11 countries in Africa, Asia and Latin America. This includes seven African countries engaged in the Grow Africa partnership, jointly convened by the African Union, NEPAD and the World Economic Forum.[48]

- **Civil Society Organizations (CSO)** and Non-Governmental Organizations **(NGOs)** have become key players in the emerging global governance system of food security, involved in a number of intergovernmental consultations, such as in all World Food Summits and in the Committee for Food Security (CFS), where they are formal members through several umbrella organizations.

83. Despite the attention given to the issue, some see the global food governance system as dysfunctional. An article by the Böll Foundation in Germany[49] concludes that the 2008 food price crisis revealed a "governance vacuum." Structural adjustment policies, particularly of the Bretton Wood institutions, are seen as having failed to ensure food and nutrition security for vulnerable populations, as they weakened agricultural institutions in developing countries and diverted investment funding away from agriculture. Overall, governments in developing countries are not seen as having the capacity or will to impose accountable national governance, thus leaving a regulatory vacuum. This is seen as allowing large food production corporations to regulate their business without governmental oversight, resulting in differences in interests between small food producers[50] and the global agro-industrial food corporations systems. Three trends are seen as driving this situation: the shift and devolution of normative control from national governments to private corporations, the growing power of transnational food-related corporations in standard setting, and the emergence of new food movements presenting alternative visions of the food system. Also the international institutions are seen as fragmented. While the Bretton Woods institutions and the WTO

47. Source: www.weforum.org/reports/putting-new-vision-agriculture-action-transformation-happening. The WEF is an independent international organization committed to improving the state of the world by engaging business, political, academic and other leaders of society to shape global, regional and industry agendas. The initiative is led by 28 global partner companies of the World Economic Forum which provide strategic leadership and championship of the initiative, and includes: Agco Corporation, Archer Daniels Midland, BASF, Bayer AG, Bunge Limited, Cargill, The Coca-Cola Company, Diageo, DuPont, General Mills, Heineken NV, Kraft Foods, Louis Dreyfus Commodities, Maersk, Metro AG, Monsanto Company, Nestlé, PepsiCo, Rabobank, Royal DSM, SABMiller, Swiss Reinsurance Company Ltd., Syngenta, The Mosaic Company, Teck Resources Limited, Unilever, Vodafone Group, Wal-Mart Stores Inc., and Yara International.

48. www3.weforum.org/docs/WEF_CO_NVA_Overview.pdf

49. Nora McKeon: Global Governance for World Food Security: A Scorecard Four Years After the Eruption of the "Food Crisis", Berlin, 2011, www.boell.de/intlpolitics/development/development-policy-10655.html

50. See McKeon and www.agassessment.org.

with their strong market-oriented approach are seen dominated by the "rich countries" , the UN system agencies[51] are perceived as weak even though more inclusive and balanced with focus on food security, rural poverty and rights-based approach. They see also an increase of international institutions[52] with a role or mandate relating to food security but not yet sufficiently integrated into food security discussion, which overall are seen as fragmented, a phenomenon that started in the 1970s.

C. Global Governance of food security: Issues and Challenges

1. Challenges and threats

84. Climate change is taking place in a world of highly integrated financial and economic markets, financial crisis and market inefficiencies, and globally operating agro-industrial corporations in the agricultural input as well as food marketing sectors. Even though the vertical and horizontal integration of food chains and the globalization of the food commodity market enables season-independent food supply in all urban areas, this interconnectivity also means that production shortfalls or price fluctuations in one major producing area or one major agricultural commodity can impact on other producers or consumers, in totally different regions.

85. This has major consequences for the food security of entire populations or nations, in particular for the urban poor in all developing countries. The impact of such fluctuations can be amplified significantly (as in 2008) by uncoordinated national policies and results in crisis situations particularly for those urban households in developing countries, for which food still absorbs a major share of daily income. The risk of political unrest triggered by high food prices and poverty in highly populated areas in developing countries is therefore increasing.

51. e.g. FAO IFAD and UN Human Rights Council Special Rapporteur on the Right to Food.
52. E.g. WHO, UNICEF, ILO.

2. Cooperation and collective response mechanisms

86. Since 2008, price volatility has brought to the foreground the fragility of the global food system, and a better awareness and understanding of the political risks associated with not preventing major price and/or production shocks. Food price increases threaten the livelihood of poor populations, particularly in the urban areas, where food expenditures absorb a major share of daily income. The 2008 food riots in several developing countries, due to rising food prices, not only created local unrest, but also created the awareness among global political leaders that food insecurity could become a threat to political security in terms of destabilizing established political systems.

87. The series of global meetings and discussions, involving the leaders of the G8 and G20, the UN Secretary-General and all UN system agencies that followed and dealt with food security are evidence of the strategic importance now assigned to stable food markets and prices, and food and nutrition security. The response included the bundling of the capacities of several UN system agencies in coherent action programmes under the leadership of the UN Secretary-General. This directed substantial resources from several global funding sources (e.g. World Bank, European Union) to the issue of food and nutrition security and by engaging powerful non-governmental actors (private sector, NGOs and CSOs) in a collaborative effort by enabling them to cooperate in the restructured and revitalized Committee of Food Security (CFS). In particular the issue of individual nutrition security (right for food) therefore became more prominent on the global agenda and is now included in the resourced programmes of action.

88. The 2008 food crisis increased attention to the need for global governance of food security, but at this stage still without clearly identified leadership, even though a specific role for the UN Secretary-General and the UN system is acknowledged. In this model the UN system has been assigned two key

roles. Through the UN Secretary-General, it acts as a neutral and impartial convener for the entire multi-stakeholder system to deal with overarching political and interdisciplinary issues related to food security. Through the UN specialized agencies, it plays the role of convener and neutral information mobilizer and repository to deal with specific sectoral issues related to food and nutrition security: this includes

- The monitoring function (for early detection of extreme supply and demand variations, of food production relevant inputs -including energy and feed- as well as of food products that impact on food prices along the food chain and of the nutritional status of vulnerable groups in developing countries);

- The development function (creating of enabling conditions for more effective markets and production conditions); and

- A social protection function (e.g. through supporting vulnerable groups through emergency programmes).

89. The de facto leadership for this global governance mechanism is, however, located at the level of the G20 that have the resources to respond and that have the capacity to adapt to the parameters of the global market system, but not with the more representative United Nations organizations. The enhanced Committee for Food Security (CFS) will have a critical role to play as a forum for provoking and channeling debate, and thus influencing the UN system, but is unlikely to have a decision-making role or resources to back up its conclusions.

3. Governance and Food Security as Global Public Good and Food Insecurity as Global Public Bad

90. Most of the concepts relating to GPGs were developed in the early 2000s at the time of an intense debate on globalization.[53] These discussions were significant for both what was and what was not included or mentioned.[54] This may be due to the fact that "*many GPGs are more recognizable in their opposite form, that of Global Public 'Bads' (GPBs)*".[55] GPBs share the same characteristics as GPGs as being non-excludable and non-rival, and the goal is to reduce or remove them (e.g. spread of communicable diseases, transnational drug smuggling, international warfare and human rights abuses).

91. None of the major discussions prior to 2008 refer to food security as a GPG or food insecurity and hunger as a GPB. It was only in 2012, that a French NGO argued that "*the concept of global public goods could be applied to the agricultural sector … in terms of market regulation and international cooperation*".[56] It argued that the "economic" definitions of GPGs are too narrow and that there is a need for a "strategic/institutional definition", that aims for a "form of global governance that is not impeded by the compartmentalization and multiplication of the institutions born out of the end of World War II". The suggestion was to use the subsidiarity principle and to cover under "global public good" those goods that can be better managed by global or international governance than by national or sub-regional governance. It was within the context of the continuation of food price volatility in 2011/2012 that FAO started using the term "Global Public Goods" in its discussions that culminated in a new corporate strategic framework (2013).

92. While food and nutrition security specifically is not included, at this stage, in the general understanding of what constitutes a GPG, elements that result in improved food and nutrition security are:

- Nutrition education, nutritionally adequate agricultural production systems, application of production techniques that minimize the use of toxic chemicals and that protect the environment, prevention of cross-boundary diseases and pests that result in improved

53. Inge Kaul, Global Public Goods, UNDP, 2003 and Report of the International Task Force on Global Public Goods: Meeting Global Challenges: International Cooperation in the National Interest, 2006.

54. Stiglitz identifies: health, financial security and market efficiency, environment, human security and peace and information and knowledge; the "International Task Force on GPGs" identifies six GPGs as critical: Preventing the emergence and spread of infectious disease; tackling climate change; enhancing international financial stability; strengthening the international trading system; achieving peace and security, which underlies and is essential to all the others; and the cross-cutting issue of knowledge." Kaul specifically reviews equity and justice, market efficiency, environment and cultural heritage, health, knowledge and information, peace and security"

55. Source: Joseph Stiglitz, Sustaining Our Public Goods, Economic Briefing No. 3, Towards Earth Summit, 2002, www.earthsummit2002.org/es/issues/GPG/gpg.rtf

56. www.momagri.org/UK/editorials/-Managing-Agriculture-as-a-Global-Public-Good-_208.html

agricultural production and thus directly contribute to general "health" of the population;

- Transparency of food commodity markets at global, regional, national and local level to prevent market failures, and thus contribute to "market efficiency" and "international trading systems";

- Investment in agricultural research and education results in ecologically correct agriculture, as well as in adaptation of production systems to new climatic conditions, and thus contributes to tackling the challenges of "climate change";

- Provision of adequately priced food products to urban consumers, and support to small holders in maintaining their livelihood, diminish food insecurity, and the political unrest or instability caused by erratic price movements or undersupply. This contributes to "peace and security";

93. It is evident that issues related to global and individual food security can no longer be resolved through action limited to the national or local level, but that there is need for cooperation and coordinated multi-stakeholder action at the global level and with a global perspective. The interdependency of national food-related production systems and markets, due to their vertical and horizontal integration, and their dependence on the global financial and energy markets, means that national policies alone cannot fully buffer against risks like inefficiencies and volatility.

94. Yet most food production systems and markets are dominated by private actors who in many cases operate through global corporations that function according to the principles of private business. Implicitly less profitable research areas may be neglected; research is therefore biased against small holders and biodiversity, and not necessarily geared towards the needs of the vulnerable population groups or markets with reduced purchasing power. There are examples where environmental concerns became part of corporate business strategies due to increasing importance of responsible corporate entrepreneurship in the public debate and better understanding of long-term sustainable profits. Barring this, investments in support of environmental goals depend on the public sector.

95. The effects of climate change require adaptation of food production systems, but many governments in the developing world may not have the resources required to support research and implementation of mitigation systems. Similarly challenging will be identifying mitigating actions that are affordable for smallholders. Responses at the national level will not be sufficient to buffer against country-level food insecurity and failure to address these global trends will have transnational repercussions and inaction will result in Global Public Bads.

96. Mitigating against food insecurity requires acknowledgment that private corporations are key players in the global food security system, and that they have the capacity to resist or avoid national legislations, particularly in developing countries. Given that it is unlikely that the current approach to private management of food supply chains and markets will change, the only solution is to involve these private and non-state actors in the global governance of food security in the broad sense. This emerging role has been acknowledged by the inclusion of the private sector in the CFS and FAO's efforts of defining a "Strategy for Partnerships with the Private Sector "[57] going in this direction.

97. The fact that the "right to food" is an accepted human right will continue to create political pressure in developed countries to provide protective support to the vulnerable populations concerned.

57. CL 146/LIM/4: FAO Strategy for Partnerships with the Private Sector, March 2013, and CL 146/8: FAO Strategy for Partnerships with Civil Society Organizations, April 2013.

4. Food and nutrition security in a global multi-stakeholder system and the role of the United Nations

98. The food price hikes in 2008 heightened global interest in food security and placed it at the center of the global agenda. The momentum generated by the 2008 crisis has been seized by the UN Secretary-General, the G8, G20 and the UN system organizations. Food security was on the agenda of the Rio +20 Conference and is also on the agenda of the current "We can end poverty 2015 Millennium Development Goals" initiative.

99. The collective and coordinated response of the international community during the past years through multilateral mechanisms (including the United Nations) as well as bilateral channels (including NGOs) is a tacit acknowledgement that food and nutrition security represents a global public good. However, in a multi-stakeholder world, global governance of food security can only be effective if it involves all stakeholders that are part of the food supply chain, including producers and consumers of intermediary and final products. The roles of governments both as national entities as well as members of multilateral institutions are well-defined. There is a need, however, to also define the role of the private corporate sector, and in particular those involved in the management of global food chains, in the global governance of food security. They need to be involved, as they are the key actors and beneficiaries of those global public goods through which commercial operations at a global scale become feasible.

100. One of the drivers of commercial corporate behavior is the shareholder value[58] concept that may impact negatively on the concept of food security as now defined by the international community, as its focus is on the gains for the company which may not coincide with the needs of society. The discussion around "corporate social responsibility"[59] was a reaction to the shareholder value approach and opens up drivers for corporate behavior to ethical values.[60] However, as markets currently value in most cases price and quality of products and services higher than "corporate social responsibility" the shareholder value concept will remain the main drivers for corporate behavior also of large food corporations unless markets themselves give value to other dimensions than just the shareholder value.

101. The Gates Foundation is a positive example for private sector engagement at the philanthropic level but that would not be sufficient to influence an entire sector. Other models include joint government-private sector ventures, NGO/CSO-private sector ventures or support to research and development that focus on the needs also of the poor and vulnerable, i.e. those that are already and would be marginalized in the required adjustment processes to climate change.

102. However, to have a broad and sustainable impact on food security, those forces that drive private business need to be directed through an appropriate incentive structure towards approaches that are consistent with the goals of ensuring sustainable food security. The challenge will be creating a public opinion environment where managers of food chain corporations see advantages and benefits in contributing to sustainable and socially responsible food production and development while at the same time pursuing corporate goals established by their shareholders.

103. Models for this already exist with the requirement for UK companies listed[61] on the Main Market of the London Stock Exchange to measure and report as from 2013 greenhouse gas (GHG) emissions (carbon foot print). In the United States a GHG reporting

58. Wikipedia: "Shareholder value is a business term, sometimes phrased as shareholder value maximization or as the shareholder value model, which implies that the ultimate measure of a company's success is the extent to which it enriches shareholders."

59. Wikipedia: "CSR policy functions as a built-in, self-regulating mechanism whereby a business monitors and ensures its active compliance with the spirit of the law, ethical standards, and international norms. CSR is a process with the aim to embrace responsibility for the company's actions and encourage a positive impact through its activities on the environment, consumers, employees, communities, stakeholders and all other members of the public sphere who may also be considered as stakeholders."

60. This is a concept that has its roots in ethics discussions in religious circles in the 18th century and that regained prominence with the ecologist debate in particular in Europe. See also en.wikipedia.org/wiki/Socially_responsible_investing, en.wikipedia.org/wiki/Corporate_social_entrepreneurship, www.ssireview.org/blog/entry/the_responsible_entrepreneur and www.entrepreneur.com/encyclopedia/social-responsibility.

61. www.businessgreen.com/bg/news/2185657/coalition-confirms-introduction-mandatory-carbon-reporting.

programme was launched in 2012.[62] The ILO's "decent work" agenda also aims at creating public awareness about the link between working conditions and the final consumer product. At this stage, no equivalent approach to food security exists.

104. Given the dependency of food security on the approaches and behaviors of the corporate food industries, there is a need for achieving similar public awareness of their role and responsibility in ensuring food security for all and in all places, while remaining consistent with corporate business priorities. In the market economy system this can be achieved through the normative standards setting role of governments and by the markets if they can be guided towards rewarding value-based "ethical corporate behavior". A concept for "food security" that is equivalent to the "carbon foot print approach" and "decent work agenda" needs to be developed through which the public would be able to monitor actions of food-chain and other corporations in relation to food security.

105. At this stage, public awareness focuses exclusively on the impacts of extreme situations of food insecurity, when due to disasters or calamities populations are negatively affected, but awareness about the impact of policies and corporate behaviors, as well as of climate change on overall food supplies and food security is still at a very nascent stage even though articles and documentaries dealing with these aspects are on the rise.[63] It can be expected that the related public debate will increase in intensity, as the impact of climate change and population growth on food security will become more evident.

106. Introducing the concepts of food security into what is perceived as "socially responsible entrepreneurship" would be a first step and the UN system, as an intergovernmental governance system, can lead in setting the public opinion agenda and developing a normative framework for "socially responsible entrepreneurship" that includes food security, ecology and sustainability as "performance indicators" for corporations in support of the "return-on-investment" criteria. The expectation is that in a "food security aware" population, transparency on the performance of the food-chain corporations in these fields would, combined with increased interest of the populations in most countries, impact on the market behavior of these corporations, and culminate in "food security compatible" actions that would be consistent with the concept of share-holder value as key driver for corporate actions.

107. There is a need for developing criteria that allow tracking the impact of foodchain and other corporations on food security, similar to what has been developed for the carbon footprint. These could be linked partly to the ecological criteria that are increasingly being developed, but new indicators would be needed particularly where their activities (or non-activities) impact on the livelihoods of vulnerable or marginal groups in developing countries, be it as human resource providers, producers or consumers. This could concern their contribution to climate change mitigation measures through research and development, their focus on sustainable and healthy food production, the carbon footprint of their products etc.. Environment and food-security aware consumers are expected to favor, as can already be observed increasingly, products from those companies that operate in consistency with globally agreed ethical values (e.g. non acceptance of child labor etc.).

108. In industrialized countries the population is increasingly sensitized to the risks and issues of complex food chains and the emerging public debate about the ethics of speculating in food commodities is an indicator for the increasing awareness of the role of food chain corporations in ensuring food security.[64] This overall awareness needs to be further expanded to also include food security risks related to climate change and population growth. With the increase of a "value-oriented" consumer awareness, it is expected that corporations see it in their interest to be perceived as maintaining and protecting human heritage and capi-

62. www.epa.gov/ghgreporting.

63. www.guardian.co.uk/global-development/2013/apr/13/climate-change-millions-starvation-scientists and www.spiegel.de/wissenschaft/natur/welternaehrung-klimawandel-bedroht-die-globale-nahrungsproduktion-a-894254.html

64. www.spiegel.de/wirtschaft/soziales/ilse-aigner-ruegt-deutsche-bank-wegen-spekulation-mit-nahrungsmitteln-a-879087.html

tal rather than undermining or destroying it. In this context, it can be assumed that many will value cooperation with the UN system – as the driver in value-setting - as advantageous for their corporate goals; the UN system has started setting criteria for such public-private sector partnerships.[65]

109. The concept of "socially responsible entrepreneurship", linked to sustainable development and food production, should be part of a broader debate on business ethics in a globalized world, with growing and mobile populations and limited resources to feed them, and the role of private business in the generation of GPGs and GPBs. Non-action will result in a decline of the GPGs and increase of GPBs, including food and nutrition insecurity, and with it political instability and maybe even conflict over access to resources.

110. The UN system agencies will also need to support national governments in developing countries with policy analysis and advice to empower them to define and implement frameworks consistent with global goals on food security and sustainable development. These should condition the activities of globally operating multinational corporations, regardless of whether they operate directly or through national subsidiaries.

5. Possible course of action

111. The emerging focus on governance, policy support as well as providing enabling environments and partnership in the UN system is evidence for the recognition of the comparative advantage of the UN system in this particular dimension. Food security will enter increasingly into the focus of the global governance debate, largely due to the interdependency of economies and the agrifood chains that require cooperation in order to deal with the challenges of the 21st century.

112. Given the complexity of the multi-stakeholder food security system, only the authority and convening power of the UN Secretary-General and UN system organizations can provide that leadership that is required for defining the goals, roles and responsibilities of all stakeholders in the food supply system to ensure food security.

113. Today's university education generates the managers and leaders of 2020 onwards. They will have to deal with the consequences of the ongoing climate change and population growth. Just as the 1980s saw the mainstreaming of a self-centered and egoistic "shareholder" mentality, encouraging de-regulation and creating the conditions where financial speculation can destabilize entire countries, it must be possible to make these future managers and leaders aware of their responsibilities through appropriate ethics programmes. This will not be easy, but without "new business ethics" the idea of "socially responsible entrepreneurship" – that operate within the paradigm of ensuring that investment is profitable to the shareholder while at the same time upholding values that are agreed to by society – will not gather the required momentum. And without such "socially responsible entrepreneurship" it will not be possible to deal with the challenges of 2050, given the dominant role of the corporate sector in food production. The initiatives of the European Union to provide a normative framework for such "socially responsible entrepreneurs" are moves in the right direction.[66]

114. These suggestions are not entirely new and are already occurring to a certain extent, but the focus has been on climate change, with food security on the margins. Links between the developed world and the global hungry have not always been made clear, even as individuals in industrialized countries are becoming more vulnerable to hunger themselves. The challenge for political and opinion leaders across the globe will be to resist the temptation to feed inward looking (nationalistic) policies and to direct national debates towards understanding that the collective well-being

65. www.fao.org/docrep/meeting/028/mg311e.pdf and www.fao.org/partnerships/fao-partnerships/private-sector/en/.

66. ec.europa.eu/enterprise/policies/sustainable-business/index_en.htm.

requires a prominent place in the "value" menu of individuals, organizations and societies.

115. The UN Secretary-General, with the support of the intergovernmental mechanism of the UN system, is probably the only individual in the world that has the authority and capacity, given to him/her by the world's governments, to launch and sustain such a "business ethics debate" that filters down to the media and university and schools across the world. Obviously, such a debate has to involve the political, moral and ethical leaders in the world, including the leaders of the biggest business corporations, through the various mechanisms and fora that already exist (e.g. World Economic Forum and others). Doing otherwise would perpetuate a zero-sum game in which the most needy are the least likely to reap the rewards of greater investment in food and agriculture.

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